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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-------------------------|---------------------|------------------|
| 10/575,747 | 04/10/2006 | Philippe Maurin-Perrier | 1759.216 | 2355 |
| 23405 7590 07/16/2008 HESLIN ROTHENBERG FARLEY & MESTI PC 5 COLUMBIA CIRCLE ALBANY, NY 12203 | | | | |
| EXAMINER | | | | |
| FOGARTY, CAITLIN ANNE | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1793 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 07/16/2008 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/575,747

Applicant(s)

MAURIN-PERRIER ET AL.

Examiner

CAITLIN FOGARTY

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 4/10/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

1. Claims 1 – 5 are pending and presented for this examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement (IDS) was submitted on April 10, 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. Claims 1 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrington et al. (US 2,266,378).

With respect to instant claim 1, col. 1 lines 1-6, col. 3 lines 8-47, and col. 4 lines 22-75 of Farrington disclose a method for treating ferrous alloy parts by sulfurization, wherein the parts are immersed in a bath of an aqueous solution, without the passage of an electric current. The aqueous solution comprises 25-60% caustic soda and 0.5-15% sulfur and the solution is heated to a temperature of 150-275°F (66-135°C) for a period of for example, 10 minutes for a cylinder liner (see Example 2) or 45 minutes for a piston ring (see col. 3 lines 40-47). The temperature range overlaps with the range recited in instant claim 1 and the period for a cylinder liner is within the range recited in instant claim 1. Furthermore, the concentrations of caustic soda and sulfur either overlap or are close to the concentrations recited in instant claim 1. It would have been obvious to one of ordinary skill in the art to select sodium thiosulfate and sodium sulfide as the sources of sulfur in the instant method because col. 4 lines 56-66 of Farrington teach that the sulfur may be introduced in the form of compounds such as sodium thiosulfate or a mixture of sodium sulfide and sodium sulfite.

Since the claimed concentration ranges of claim 1 either overlap or are very close to the ranges disclosed by Farrington, a prima facie case of obviousness exists. See MPEP 2144.05. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed concentrations from the concentrations disclosed by Farrington because Farrington teaches the same characteristics of the final product (i.e. resistance to jamming) in the disclosed range.

In regards to instant claims 2 and 5, col. 4 lines 22-38 of Farrington teach that the temperature of the aqueous solution is 150-275°F (66-135°C) which overlaps with the range recited in instant claim 2 and the temperature of instant claim 5.

Regarding instant claim 3, Farrington does not specifically disclose that the period is about 15 minutes. However, col. 3 lines 8-47 of Farrington teach that the period for a cylinder liner is 10 minutes and the period for a piston ring is 45 minutes. Therefore, it would have been obvious to one of ordinary skill in the art that the period is dependent on the type of part that is treated. It would have been obvious to one of ordinary skill in the art to use routine experimentation to determine the proper period for each type of part.

With respect to instant claim 4, col. 1 lines 1-6 of Farrington teaches that parts of machine elements may be treated using the method.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAITLIN FOGARTY whose telephone number is (571)270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

CF